LONELINESS AND SOCIAL SKILLS OF MALE COLLEGE STUDENTS

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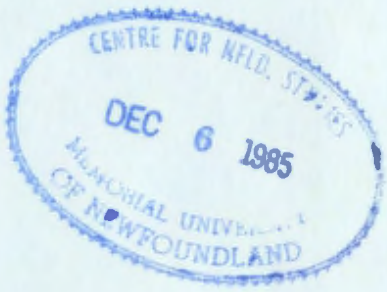
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LONELINESS AND SOCIAL SKILLS OF MALE COLLEGE STUDENTS

BY

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ABSTRACT

Evidence has suggested that there are behavioral differences between lonely and non -lonely people. The present study investigated the social behavior of lonely and non-lonely males in a naturalistic setting with a same sex stranger. It was hypothesized that lonely subjects would demonstrate less interest in their partners and be more anxious, hostile and depressed than non-lonely subjects. It was also hypothesized that the type of dyad subjects participated in would influence interpersonal behavior.

Subjects were 56 male undergraduate students (mean age = 18.68). Subjects were paired in three kinds of dyads. Ten pairs were in dyads consisting of two lonely people; 10 pairs were in dyads of two non-lonely people and eight pairs were in a mixed dyad. Loneliness was categorized according to subjects' scores on the UCLA Loneliness Scale.

Results showed that lonely subjects rated their partner's as more anxious than non-lonely subjects did ($p < .05$). Results also showed that the type of dyad did not affect the interaction. There were no other differences between lonely and non-lonely individuals. The results of the present study are discussed in light of methodological differences between the present and other studies and sex differences.

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INTRODUCTION

Introduction.

Loneliness, a distressing problem, is an almost inevitable part of life. Survey data suggest that a substantial proportion of the population experiences intense feelings of loneliness. In one survey which took samples primarily from the larger American cities 26% of the subjects reported that they had "felt very lonely or remote from others during the past few weeks" (Bradburn, 1969). Among university students the incidence of loneliness appears to be higher than among the general population. In a recent survey of over 300 university undergraduates 38.4% reported having "feelings of extreme loneliness often or sometimes" (Robbins, 1981). Sermat (1980) who studied loneliness among college populations for many years reports that only one or two percent of his subjects report never having experienced loneliness. Loneliness is not only intense and pervasive, but has also been linked with more serious problems such as alcoholism (Nerviano & Gross, 1976), minor psychiatric problems (Miller & Ingham, 1980), and suicide (Wenz, 1977). Jacobs (1967) found that adolescent suicide attempts followed what the adolescent perceived to be a complete breakdown of meaningful social relationships. The implications of these findings alone affirm the value of studying this problem.

Nature of loneliness

Relative to other psychological phenomena little empirical research has been conducted on loneliness (Peplau & Perlman, 1979; Weiss, 1973).There have been a number of barriers to loneliness research. The construct "loneliness" is difficult to define and it has often been confused with "alone". "Alone" is an objective term which signifies that a person does not live with others or has no friends. The term "lonely" is more subjective and refers to a negative feeling state concomitant with the cognition that relationships per se are lacking or that something important such as intimacy is absent from one's relationships.

Loneliness has been categorized according to different criteria by different authors. For instance, loneliness has been divided into two classes depending on the kind of relationship one lacks (Weiss, 1973) while others classify loneliness according to whether or not it represents a chronic or a transient problem (Jones, 1978; Shaver, Furman, Buhrmester & Willems, Note 6). Transient (or state loneliness) might be induced by situational factors such as ending a close emotional relationship or moving to a new community. Trait loneliness endures for a long period of time and appears to be related to poor social skills and internal attributions for social failure. This brings us to a third possibility, i.e., that loneliness is

related to a higher number of dysfunctional cognitions concerning the nature of relationships, and other people. Conceivably those who report being lonely are more inclined to ruminate about dissatisfactions with their relationships than to recognize the rewarding aspects of their social lives.

Weiss (1973) describes loneliness as a deficit state (p. 228) and proposes that there are two different forms of loneliness: (a) social isolation (failure to satisfy the need to be part of a social network); and (b) emotional isolation (lack of a significant other). A newcomer to a community experiences social isolation until becoming comfortably established among a new circle of friends. A person who has lost a loved one (e.g., through death or divorce) experiences emotional isolation until the return or replacement of the lost person. For example, a widow or widower might remarry. Weiss also proposes that one kind of relationship cannot compensate for the absence of another, e.g., increased involvement with work or children does not mitigate loneliness resulting from the absence of an intimate attachment. However, more than one individual can meet one's intimacy needs, and one is not dependent on a specific group to meet one's needs for a social circle.

Weiss' (1973) concept of two different kinds of loneliness is useful. People do have differing social needs which when unmet may result in loneliness. To date there has been no empirical test of

Weiss' model of loneliness. It is possible that Weiss' findings are related to the casual interview method that Weiss used to collect his data. It is conceivable that asking people directly about loneliness and their social life tends to elicit biased responses. There are two reasons for this: (a) loneliness has a stigma attached to it which may lead subjects to be reticent to speak about their experience; and (b) when respondents are speaking about loneliness in retrospect their memory of events may be biased because the experience of loneliness is very painful and remembering it may be very unpleasant.

Following from Weiss, loneliness is generally agreed to be a social deficit. In Peplau and Perlman's (1979) definition loneliness exists "to the extent that a person's social network is smaller or less satisfying than the person desires". In an overview of how loneliness is defined Peplau and Perlman (1982) note that several factors are common to most definitions of loneliness. These are: loneliness results from social deficiencies, is subjective and is almost always aversive. They also outline three different factors emphasised in the approach to loneliness: the human need for intimacy, cognitive processes and insufficient social reinforcement.

Affect and loneliness

Loneliness is characterized by a number of negative feelings yet is identified as a unique state. In a correlational study of over 400 students Ellison and Paloutzian (Note 2) found that the frequency of loneliness most strongly correlated with feeling unloved, unwanted, worthless and rejected; these correlations ranged from .30 to .39. Russell, Peplau and Ferguson's (1978) data on 133 university students show that scores on the UCLA Loneliness Scale correlate with a number of unpleasant feelings: being empty (r = .58); self enclosed (r = .54); restless (r = .38) and bored (r = .46).

In an investigation of the validity of the Revised UCLA Loneliness Scale, correlations were computed between the Revised UCLA Loneliness Scale and nine mood and personality measures and a self-labeling index of loneliness. In order to test whether the other personality variables were more closely related to loneliness than the self-labeling index, a factor analysis was first conducted on the nine measures. This yielded four factors: social risk taking, negative affect, social desirability, and affiliative motivation. The social desirability factor did not account for any of the variance in loneliness scores, but the combined effect of the other three factors accounted for 43% of the variance. After elimination of the effects of the above four factors in a hierarchical regression an additional

18% of the variance was explained by the index of self-labeling loneliness. This index contained six questions which involved responses in which the subjects identified themselves as lonely. An example question was "During your lifetime how often have you felt lonely? ". Responses were summed to form a single loneliness score (Russell, Peplau & Cutrona, 1980). It thus appears that when people describe themselves as lonely, they are referring to a state which is distinct from related factors such as depression or lack of motivation to affiliate with others. Further evidence that loneliness is a unique psychological phenomenon has been provided by Weeks, Michela, Peplau, and Bragg (1980). Their analysis of data under a series of structural equation models demonstrated that loneliness and depression are related but there is no causal connection between the two.

Lonely People's Perceptions about Loneliness and its Causes

One popular stereotype of loneliness is someone who is far from home or who has little opportunity to interact with others. External situational events such as moving to a new community or ending a close emotional relationship can precipitate loneliness (Peplau & Perlman, 1979). It would be reasonable to expect that those who move frequently would experience much loneliness. However except for temporary discomfort while adjusting to a move, those who move

frequently indicate that they have as many friends as those who have lived in one community for many years. They also report being as satisfied (Rubenstein & Shaver, 1980). These results suggest that while external factors may cause temporary (state) loneliness they are not sufficient in themselves to explain how chronic (trait) loneliness is maintained.

In a study that analyzed over 300 autobiographical statements, 75% of all subjects attributed their loneliness to not having someone with whom they could discuss personal and private matters (Sermat & Smyth, 1973). In another study inverse correlations were reported between loneliness and measures of perceived social support that the individual receives from family or friends (Corty & Young, Note 1). Such evidence suggests that the quality of one's relationships is more likely than the quantity to influence feelings of loneliness. These unsatisfactory relationships may reflect a need to develop social skills which would facilitate the development of intimacy with others.

Lonely people do not necessarily lack opportunities for social contact, yet they are often dissatisfied with existing social ties (Rubenstein & Shaver, 1980). Lonely students have a comparable number of acquaintances to their non-lonely peers, but have fewer close and intimate friends (Jones, Note 3). In a study of first year students Ross (Note 5) found an inverse correlation between loneliness and the number of good friends at university. He also reported that students

who were the least lonely believed that they had more good friends than other students and were in fact able to list more good friends ($\bar{X}$=9.33) than those who believed they had as many ($\bar{X}$ = 8.54) or a fewer number ($\bar{X}$ = 6.83) of friends than their peers. This suggests that despite the fact that lonely students may casually meet as many people as their peers, they form friendships with fewer people.

Lonely people often report being dissatisfied with their living situation, number of friends, quality of friendships, and marriages or love relationships (Rubenstein, Shaver, & Peplau, 1979; Rubenstein & Shaver, 1980). The fact that these data are correlational and retrospective prohibits making any cause and effect statements about the relationship between dissatisfaction and loneliness. Possibly to the objective observer lonely people's relationships would appear to be not as good as those of other people. Support for this comes from findings that the degree of intimacy and degree of perceived social support are negatively correlated with loneliness (Corty & Young, Note 1).

The above findings imply that merely teaching a client where to go to meet people or how to initiate relationships would not suffice to alleviate that person's loneliness. Granted it is necessary to be able to initiate and maintain social relations; however it is also necessary to have a capacity for intimacy. Furthermore, it is important to recognize that even when people are knowledgeable about

what constitutes appropriate social behavior a number of factors may inhibit the behavior. These may include shyness, social anxiety or depression.

Loneliness and Social Skills

Various methods have been employed to study how social skills are related to loneliness. To date loneliness researchers have gathered data by means of casual interviews, pencil and paper measures, behavioral diaries and direct observation of subjects' behavior in analogue situations. Each research method yields a different type of data and answers different questions about the nature of loneliness. Researchers have examined who lonely people interact with, how often they interact (e.g. Wheeler & Reis, Note 7) as well as how attentive lonely people are toward others (e.g. Jones, Note 3). Researchers have also focused on specific social behaviors such as self disclosure (e.g., Chelune, Sultan & Williams, 1980). The following section will survey the various types of studies which have been done and will attempt to point out the problems associated with each method of study.

Correlational studies have yielded data concerning lonely people's patterns of social interaction. One study, in which subjects

filled out rating scales, found that lonely college students spent more time alone, dated less frequently, spent less time discussing personal problems with friends and had fewer close friends (Hoover, Skuja, & Cosper, 1979). This is consistent with Jones (Note 3) who reported that lonely people had less friends but as many acquaintances as their non-lonely peers. It is also consistent with findings by Ross (Note 5).

A problem associated with data obtained from questionnaires is that they are subject to distortions of the subject's memory. This type of bias can be avoided by having subjects keep detailed logs of their own behavior. One such study by Wheeler and Reis (Note 7) asked 43 males and 53 females to record the occurrence of all interactions of ten minutes or more. Their findings suggest that one variable which mediates loneliness is interacting with people who are warm, empathic and socially responsive. These qualities are often associated with the female sex role, and it appears that females are more likely to display them; however it should be noted that they are not restricted to one sex. For both sexes there was a negative correlation between loneliness and the amount of time per day spent with females (males $\underline{r} = -.35$; females $\underline{r} = -.24$). Low loneliness scores were also related to greater intimacy, disclosure, and pleasantness of the interaction (with either sex) for both sexes. Analysis of the data showed that there were two categories of non-lonely males. The largest group of non-lonely males had

meaningful relationships with males and spent more time with females than lonely males; the second group of non-lonely males rated high on sex role femininity (i.e., showed warmth and nurturance in their relationships) and had meaningful relationships with males. Thus it appears that meaningful relationships with either sex will help to mitigate loneliness and that this is a more important factor than the number of interaction partners.

Questionnaires and behavioral logs yield useful and detailed information about social interaction patterns but they do not permit analysis of more subtle behaviors manifested within any given interaction. In order to collect data reliably and validly on the dynamics of an interaction it is necessary to observe live or videotaped behavior. In most of the following studies data have been obtained through behavioral observation.

Behavioral observation allows the researcher to collect data of which the subjects themselves are unlikely to be aware and therefore unable to report. For example, Jones (Note 3) reported that lonely people were relatively unresponsive to others and more focused on themselves. He paired subjects with opposite sex strangers so that subjects' loneliness status and sex were counterbalanced. Trained raters blind to the subjects' loneliness status analysed the verbal content of the interactions and found that lonely subjects asked their partners fewer questions, made more self statements, and changed the

topic more frequently than non-lonely persons. They were also slower to respond to their partner's previous statement (Jones, Note 3). One implication of these findings is that others probably do not find it rewarding to interact with a lonely person since such behavior is not conducive to creating a good relationship.

In an exploration of possible reasons for the maintenance of loneliness, Jones, Freemon & Goswick (1981) conducted a series of studies to examine the correlates of loneliness. For both sexes loneliness was positively correlated with shyness (r = .50), public self consciousness (r = .38) social anxiety (r = .45) and was negatively correlated with self esteem (r = -.45).

Jones et al. (1981) looked at attitude and self report scales, ratings of others following dyadic interactions, and ratings of self and others at several times during ongoing group meetings. Two stable effects emerged: first, lonely subjects perceived themselves and their social skills more negatively than others; second, lonely people (especially women) regarded others more negatively. Measures completed in the first study included the original UCLA Loneliness Scale (Russell et al. 1978), The Fundamental Interpersonal Relations Inventory (FIRO-B) and inventories on: assertiveness, self esteem, self disclosure, sensation seeking, self-consciousness and shyness.

In the second study of this series only mixed-sex dyads were

formed. Some dyads had a lonely male paired with either a lonely or non-lonely female, while some had a non-lonely male with either a lonely or non-lonely partner. In other dyads a lonely or non-lonely female's behavior was examined while interacting with a lonely or non-lonely male. Subjects were informed that the purpose of the study was to examine how people get acquainted. Following 15 minute interactions subjects completed inventories of interpersonal attraction and self esteem and the FIRO-B as they thought their partner would answer; subjects also evaluated their partner's overall attractiveness and behavior. Findings showed that lonely subjects felt more negatively about others than non-lonely people. Lonely females had less esteem for their partners and lonely men liked their partners less. In general, others did not perceive lonely people differently, but lonely people thought that other lonely people were less socially responsive.

Study three used a number of scales to test general attitudes, and found that lonely people felt less acceptable to others and were less accepting of others. They also thought that the world was unjust and felt more powerless and socially isolated. Study 4 was designed to test whether or not the results of study 2 were due to the laboratory situation. The subjects who met regularly as part of a course were tested during their third and seventh weeks together. Initially lonely men were less likely to be selected as someone likely to act as a group leader and were perceived less positively than

others. These differences disappeared by the seventh week, but they suggest that under some conditions lonely people are perceived differently. Possibly lonely people behave differently as they get to know someone. The authors speculate that lonely people create a negative first impression, which leads others to avoid them if possible.

Weiss (1973) proposed that lonely people continually appraise others in terms of their potential for not providing relationships and are therefore overly sensitive to others' social cues and tend to minimize or exaggerate other's signs of hostility. However, Jones (Note 3) reports that lonely people are relatively insensitive. To test this Gerson and Perlman (1979) examined the communication skills of 66 undergraduate females selected for the study on the basis of their UCLA Loneliness scores. Subjects were divided into three categories: non-lonely, situationally lonely and chronically lonely. Each subject was videotaped while rating the pleasantness of five categories of slides. Each subject subsequently viewed but did not hear at least one person from each of the three groups. The experimental task was to guess which category of slide the other person had just seen and to guess how that person had rated the slide on a 7-point pleasantness scale. Loneliness did not make subjects more sensitive to others' emotional expressions. Results indicated that the situationally (state) lonely group was significantly better at communicating their emotions than either the chronically (trait)

lonely group or the non-lonely group. The authors had predicted this because situationally lonely individuals are highly emotionally aroused. The results are incompatible with the view that loneliness fosters oversensitivity to signs of rejection by others (Weiss, 1973).

Lonely people tend not to describe themselves as friendly (Rubenstein & Shaver, 1980) and report having difficulty being friendly to others (Jones, Note 3; Jones et al., 1981). Horowitz & DeSales French (1979) asked 25 lonely students (i.e., with scores of over 56 on the UCLA Loneliness Scale) and 25 non-lonely students (i.e., with scores of 28 or less on the UCLA Loneliness Scale) to do a Q-sort. They sorted a standardized set of problems into nine categories. Category 1 was "least familiar to me as a problem" and Category 9 was "most familiar to me as a problem". The lonely subjects most frequently reported problems of inhibited sociability (e.g., "found it difficult to introduce myself to others at parties"). Behavioral observations are consistent with the above reports. Following dyadic interactions lonely subjects rated their partners more negatively on personality and behavioral ratings than non-lonely subjects, but were not rated more negatively by their partners (Jones, Note 3)

Self-disclosure seems to be particularly relevant to chronic (state) loneliness. Evidence suggests that some lonely people tend to make more self-statements than others (Jones, Note 3), or to over- or

under-disclose (Solano, Batten & Parish, 1982; Chelune, Sultan & Williams, 1980). It has been suggested that "disclosure flexibility" or the ability to adequately discriminate various social cues and adapt disclosures accordingly is an important mediator in the relationship between self-disclosure and effective interpersonal functioning (Chelune, 1975). Chelune et al. (1980) have differentiated two subsets of lonely people. Those in the first group engage in high levels of social activity and know how to appropriately modulate self-disclosure. These individuals are decreasing interactions with family and friends while simultaneously increasing interactions with acquaintances and strangers. This is consistent with a pattern reported by Jones (Note 3). This pattern has also been reported as typical among university freshmen (Peplau & Perlman, 1980). Persons in the second group find it difficult to discriminate the relevant cues for self-disclosure and tend to withdraw from or avoid situations. It has been proposed that this second group might benefit from a social skills approach which encourages subjects to become more socially active and teaches them how to discriminate the relevant cues for self-disclosure.

Support for the above study comes from a recent study of disclosure behavior to strangers which suggests that the disclosure behavior of lonely subjects differs from that of non-lonely subjects (Solano et al., 1982). Lonely persons were defined as those who scored at least one standard deviation above the mean on the UCLA

Loneliness Scale. The mean was 37.1 and the standard deviation was 8.6. Twenty-four lonely and 23 non-lonely subjects of both sexes were paired with non-lonely partners with whom they expected to interact again. Both opposite sex and same sex pairs were included. Results showed that lonely persons tended to select highly intimate topics when initiating conversations with the same sex and low intimacy topics with the opposite sex. Non-lonely subjects tended to show the opposite pattern. Solano et al. (1982) suggest that the low level of intimacy offered by lonely subjects may have affected the extent to which the partner reciprocated and therefore interfered with the normal development of the relationship. It was also found that lonely subjects did not perceive that their conversations lacked intimacy and reported higher levels of familiarity than their non-lonely partners. Whether lonely subjects simply lack social skills or adopt strategies to keep others from getting to know them is subject to question. The main point is that their overt lack of responsiveness to others contributes to the maintenance of loneliness.

Skills Training

The social behavioral deficits of state lonely people make it difficult to form satisfactory relationships with others. Recent research indicates that ratings of social competence correlate with several behaviors: time spent talking, the number of questions asked,

and amount of positive conversational feedback (Minkin, Braukman, Minkin, Timbers, Timbers, Fixsen, Phillips, & Wolf, 1976). In a validation study female college and junior high school students conversed with an adult stranger and then were rated by adults from their local community on a 7-point scale of conversational ability. The correlation between the three above behaviors and ratings of social competence was .85.

In the second phase of their study Minkin et al. (1976) gave conversational skills training to four predelinquent girls who volunteered for the study. The training procedure involved instructions with rationale, demonstration and practice with feedback. The use of a multiple baseline across behaviors demonstrated that training effectively increased each target behavior. At post-training the adult judges rated the subjects as better conversationalists than at pre-training and gave them better ratings than they gave to females from a junior high school who were not delinquent.

Two related social skills studies have shown several male verbal behaviors to be positively related to the degree of attraction felt by their female partners. When Kupke, Cheney and Hobbs (1979) analysed the conversational behavior of males while they talked with a female stranger, they found that male use of what they call personal attention was significantly related to female attraction. Personal attention is operationally defined as questions or statements about

one's partner. In a subsequent study Kupke, Calhoun and Hobbs (1979) trained 30 male undergraduates to increase personal attention or minimal encouragers to talk; another group served as a no treatment control. Results showed that subjects trained to give minimal encouragers to talk received higher ratings of female attraction than other groups.

Jones, Hobbs and Hockenbury (1982) used an approach similar to that of Kupke et al. (1979) to examine the relationship between loneliness and social skills deficits. In the first of their two studies they examined the differences between high- and low-lonely students on a number of conversational behaviors. The 48 student volunteer's assignment to experimental conditions was based on a median split on their pre-test scores on the UCLA Loneliness Scale. Twenty-four mixed sex dyads were created so that the degree of loneliness was counterbalanced and each subject participated in one dyad with a stranger. Participants were asked to discuss what attracted them to the opposite sex for a 14-minute period during which they were videotaped. Blind raters scored one member of each dyad.

Findings indicated that relative to low-lonely subjects high-lonely subjects made fewer references to their partners, asked their partners fewer questions, continued the topic discussed by their partner less frequently, and emitted fewer partner attention statements. (Partner attention refers to comments or questions

referring to the partner, the partner's preceding statement, or the partner's attitudes, experiences or activities). The finding that behavioral differences do exist partially supports self report data from earlier studies indicating that lonely people had social skill deficits.

In Study 2 Jones et al. (1981) increased lonely subjects use of partner attention and subsequently examined the accompanying changes in levels of loneliness and concommittant variables. Subjects were 18 highly lonely males who had UCLA Scores of 1.5 standard deviations above the the mean. They were assigned to either an instruction group, an interaction group or a no contact control group. Following a pre-test of social interaction in which all subjects interacted with female subjects, those in the instruction condition received 1.5 hours of training to increase their use of partner attention. Training involved a description of the skill followed by modelling, practice and feedback. At post-test only the instruction significantly increased the amount of partner attention that they used, and this group's level was significantly higher than that of the interaction only group. Finally, pre-post measures indicated that only the interaction group showed a significant reduction on loneliness and self consciousness and a significant increase in self-esteem.

The Present Study

Studies to date have evaluated loneliness by using retrospective self reports (e.g., Rubinstein & Shaver, 1980) interaction records (e.g., Wheeler & Reis, Note 7) and by asking students to participate in get-acquainted exercises or discussions (e.g., Jones et al., 1981). The problems associated with the use of questionnaires and behavior logs have already been stated above. Although direct observation yields much information about subtle interaction variables which can be objectively recorded, it can be argued that the validity of results obtained from subjects placed in analogue situations is questionnable.

The problem with analogue situations is that when subjects are instructed to interact, and know they are being observed they are more likely to behave in a manner which pleases the experimenter than to behave in accord with their own inclinations. For example, in most experiments subjects are told to interact and in some cases asked to discuss a particular topic (e.g., Jones et al., 1982). In this case it is unlikely that subjects would exercise their option not to interact whereas in a natural situation they may choose not to interact. It is even less likely that subjects would decline to discuss the suggested topic and diverge to discuss a topic they chose to be of interest. Despite consistencies found among analogue studies it is conceivable that these studies have introduced a consistent bias

on some of the data reported. Possibly some of these biases have been exaggerated in a certain direction. For example, an anxious or shy individual might talk more than usual in response to demands of the experimental situation, but be much quieter in an unstructured setting.

To avoid some of these problems the present study examined the functional relationship between self-reported levels of loneliness and actual social behaviors in an unstructured situation, i.e. one in which the experimenter is not giving strong cues about expected behavior. In the present experimental situation the subjects are lead into a waiting room, and then left there while the experimenter leaves to get some questionnaires. Since subjects have not been introduced or asked to interact any conversation they have is spontaneous and unconstrained by experimental task demands. This paradigm has been used by two independent sets of researchers (Mehrabian &Diamond, 1971; Ickes & Barnes, 1977). The premise in using this relatively unstructured situation is that when subjects lack cues from the experimenter which tell them how to behave, their behavior will be more likely to be influenced by internal factors such as disposition, etc.

As stated above evidence shows that lonely people have more social skill deficits than non-lonely people. It was expected that in the present study the lonely subjects would also display more social

skill deficits than non-lonely subjects. Specifically it was expected that lonely subjects would ask fewer questions, talk less and self-disclose either significantly more or less than non-lonely subjects. It was also expected that lonely subjects would restate and highlight their partner's statements less, give fewer minimal-encouragers-to-talk, change the topic more frequently and have less eye contact. It was also expected that lonely subjects would be less likely to initiate a conversation than non-lonely subjects.

Because of these anticipated deficits it was expected that it would be more difficult to converse with a lonely person than with a non-lonely person. It was expected that this would hold true for both lonely and non-lonely persons, and therefore it was thought that interactions among three possible combinations of dyads would differ significantly. Specifically it was thought that in the dyads composed of two non-lonely people there would be significantly more interaction and that subject would pay more attention to each other than in the other dyads particularly the dyad composed of both lonely subjects. Although it was not clear how the mixed dyad might differ from the others, it was expected that significant differences would emerge. It was thought that interest in the other person would be displayed by asking questions, showing good listening skills and being willing to self-disclose.

Some research (e.g., Jones et al., 1981) indicates that lonely

have good validity and its test-retest reliability over a two month period is .73 (Russell et al., 1978). The scale yields a single score which is the total sum of the subject's answers. When the loneliness scale was initially being developed a sample of 237 young adults was tested at UCLA. For 76 males the mean was 38.7 and the standard deviation was 11.0. The range for males was 20-69. For females the mean and standard deviation were 40.2 and 12.4. Data were also collected on a sample of students who participated in a loneliness clinic. Their mean score was 60.1. At the University of Tulsa the respective means for 130 males and 135 females were 38.6 and 37.8 respectively. For males the standard deviation was 9.4 and for females it was 9.7. These results are comparable to those found at Memorial University.

A behavioral assessment of conversational skills was carried out. Recent research suggests that in vivo social behavior may not be predicted by the social skills exhibited in a highly structured role play situation (Bellack, Hersen, & Turner, 1980). The present study evaluated subjects in an unstructured conversational situation. Kelly, Urey and Patterson (1979) argue that an unstructured situation yields more valid information. The following behavioral measures were taken:

(1) ELICITING INFORMATION FROM THE PARTNER THROUGH QUESTIONING: The total number of questions which the subject asked his partner

METHOD

Subjects

All subjects were male undergraduate students at Memorial University of Newfoundland who voluntarily completed a UCLA Loneliness Scale in class and who indicated willingness to participate in an experiment by leaving their names and telephone numbers. At Memorial University the mean UCLA score for a sample of 215 male undergraduates was 39.06; standard deviation was 10.21. Eighty-five members of this sample indicated a willingness to participate in a further experiment; the mean UCLA score for this sub-group was 39.02 and the standard deviation was 10.67. The mean for the 130 remaining males was 39.07, and the standard deviation was 9.938. Data was also collected on a sample of females. The mean for female students ($\underline{n}$ = 180) was 38.01 with a standard deviation of 9.72. Fifty-six male students participated in the experiment. Twenty-eight volunteers who scored one or more standard deviations above the mean were invited to participate in the experiment and were classified as lonely. Those whose scores were more than .5 standard deviations below the mean were assigned to the non-lonely group, but those who scored more than one and one half standard deviations below the mean (i.e. raw score of 25 or less) were not accepted as subjects because the mean was very near to the bottom of the scale and it was suspected that those with very low scores had answered defensively.

The mean of students classified as lonely was 54.79. The mean for students classified as non-lonely was 29.07. The mean age of students who participated in the experiment was 18.3; the standard deviation was 1.7. The mean age of those classified as non-lonely was 18.7; the standard deviation was 2.19, and the mean age of those classified as lonely was 17.6; the standard deviation was .73.

Three kinds of dyads were formed: one with two lonely people (n = 10 dyads); one with a lonely and a non-lonely person (n = 8 dyads); and one with two non-lonely people (n = 10 dyads). Three kinds of dyads were used in order to permit an analysis of differences between subjects with lonely partners and non-lonely partners.

TABLE 1

MEANS AND STANDARD DEVIATIONS OF UCLA SCORES AND AGES OF SUBJECTS

	LONELY		NON-LONELY	
	MEAN	SD	MEAN	SD
UCLA	54.78	6.12	29.07	2.14
AGE	17.6	0.73	18.3	2.19

Procedure

During subject selection care was taken to increase the probability that members of each dyad would be strangers. This was done by matching subjects with partners who did not come from the same class, residence, or high school. Subjects were contacted by telephone to inform them of the time and place of the experiment, but were not informed in advance of the nature or purpose of the experiment. Prior to meeting the two subjects the experimenter activated hidden video equipment in a lab. Each subject was asked to come to a different part of the psychology department in order to avoid their meeting prior to the experiment. As soon as the subjects entered the observation room the experimenter explained that part of the experiment involved filling out questionnaires and that she needed to get more forms. She then asked the subjects to have a seat while she went to get more copies. As soon as the experimenter left the room she began to time exactly 5 minutes. After five minutes had elapsed she returned to the observation room and queried subjects for suspicion about being taped. She also checked to see whether or not the subjects had any prior acquaintance. The purpose of the experiment was then explained. At post interaction the subjects were asked to rate their partner on a number of measures of interpersonal attraction. They were also asked to complete a scale measuring their anxiety, depression, and hostility as well as that of their partner.

The observation room was 365 cm long and 192 cm wide and arranged

to resemble a storage room which had been temporarily allotted as a waiting room for experimental subjects. At one end of the room there was a filing cabinet on top of which had been placed some questionnaires from another study. There was also a stack of boxes which ostensibly held paper and supplies for the Psychology Department. In fact, the boxes were hollowed out and concealed a tripod, camera equipment, and audio recording equipment. In order to divert suspicion from the small hole punched in the box containing the camera, several holes were punched in other boxes. A beaker was placed in front of the camera lens in the top box and this hid the camera from view since the box was sealed to prevent any light entering the box from any other source. Beakers were also placed in the other boxes in the room so that they could be seen from where the holes were punched.

Subjects were seated at the opposite end of the room from the camera so that both faced the camera. Their chairs were approximately 16 cm apart.

Measures and Assessment

The UCLA Loneliness Scale is designed to measure an individual's satisfaction with interpersonal relationships. Subjects are asked to indicate on a 4-point scale whether a scale item applies to them never, sometimes, often or always. High scores on this scale indicate greater loneliness than low scores. The scale has been reported to

have good validity and its test-retest reliability over a two month period is .73 (Russell et al., 1978). The scale yields a single score which is the total sum of the subject's answers. When the loneliness scale was initially being developed a sample of 237 young adults was tested at UCLA. For 76 males the mean was 38.7 and the standard deviation was 11.0. The range for males was 20-69. For females the mean and standard deviation were 40.2 and 12.4. Data were also collected on a sample of students who participated in a loneliness clinic. Their mean score was 60.1. At the University of Tulsa the respective means for 130 males and 135 females were 38.6 and 37.8 respectively. For males the standard deviation was 9.4 and for females it was 9.7. These results are comparable to those found at Memorial University.

A behavioral assessment of conversational skills was carried out. Recent research suggests that in vivo social behavior may not be predicted by the social skills exhibited in a highly structured role play situation (Bellack, Hersen, & Turner, 1980). The present study evaluated subjects in an unstructured conversational situation. Kelly, Urey and Patterson (1979) argue that an unstructured situation yields more valid information. The following behavioral measures were taken:

(1) ELICITING INFORMATION FROM THE PARTNER THROUGH QUESTIONING: The total number of questions which the subject asked his partner

about his interests, background, activities, hobbies, etc. was counted.

(2) SELF-DISCLOSURE: The total number of items of information that the subjects told the partner about himself was counted, e.g. interests, hobbies, activities, background etc. An item is defined as a piece of information about oneself, such as "I have a sister." (one item), or "I like playing soccer and swimming." (two items). Simple agreements (e.g., "yes" or "I sometimes do.") were not counted.

(3) TALK TIME: The number of seconds that each person talked was recorded.

(4) MUTUAL EYE CONTACT: The total amount of time in seconds that the subjects looked directly at one another during the interaction.

(5) RESTATING AND HIGHLIGHTING: The total number of times that the subjects restated or highlighted their partner's statements. Restating refers to paraphrasing the content of the other person's message; highlighting refers to reflecting back the affective part of the message.

(6) MINIMAL ENCOURAGERS TO TALK: The total number of times the subject interjected a short phrase or sound which encouraged the speaker to continue was counted. This includes sounds such as "mm

hmm", "yeah", "I see", "right", or "I agree".

(7) TOPIC CHANGES: The total number of times each subject introduced a new topic was counted. This is defined as the number of times that the subject's comment was not a follow-up to or response to the partner's previous statement.

Interactional assessment

Subjects rated their partner on a number of measures of interpersonal attraction. The liking, desirability as a work partner and intelligence items from the Interpersonal Judgment Scale were used (Byrne, 1971). On the Interpersonal Judgment Scale, subjects rated their partners on a 7-point scale for each item. In order to have a measure of attraction the liking and desirability as a work partner items were summed. In order to gain an index of subjects' reactions to and perceptions of their partners, subjects were asked to complete the Multiple Affect Adjective Checklist (Zuckerman & Lubin, 1977). The MAACL is a scale designed to provide measures of anxiety, hostility, and depression. This brief test contains 132 adjectives and can be administered quickly. Subjects were asked to complete the scale according to how they felt while waiting for the experimenter to return and then were asked to complete the scale by checking off those adjectives which they felt described their partner while waiting for the experimenter to return.

RESULTS

Reliability of Scoring

All the dyadic interactions were recorded on videotape. Eight categories of behavior were selected for analysis. The videotapes were all rated by one person and a second rater scored a random sample of 10 dyads. The Pearson Product Moment Correlations for the behaviors ranged from .90 to 1.00 (See Table 2).

Evidence for Hypothesis

It had been predicted that lonely subjects would differ significantly from non-lonely subjects on a number of behaviors. To determine whether lonely students behaved differently than non-lonely students a series of two by two analyses of variance was carried out. There were two factors involved. Subjects were either classed as lonely or non-lonely. In the analysis the factors were the loneliness of the subject and the loneliness of the partner. Comparisons were made on the eight behavioral categories as well as on subjects' ratings of themselves and their partners.

It was expected that the subjects' behavior would vary as a function of the type of dyad to which they belonged. The dyads either contained two lonely people (L-L), two non-lonely people (N-N) or one lonely and one non-lonely person (L-N). There were 10 L-L dyads,

eight L-N dyads, and 10 N-N dyads.

The only factor which differentiated lonely from non-lonely subjects was the anxiety rating which they assigned their partners. Lonely subjects rated their partners as more anxious than non-lonely subjects. This was measured by the anxiety scale on the Multiple Affect Adjective Checklist (Zuckerman & Lubin, 1977). The mean anxiety rating which lonely subjects assigned their partners was 55.43 and the mean rating non-lonely subjects gave their partners was 50.75 (See Table 3). An analysis of variance yielded a significant main effect for the lonely groups (F (1, 52) = 5.256, $p < .05$, (See Table 4).

It was expected that lonely subjects would be more depressed and hostile than non-lonely subjects, however; their partners did not perceive any difference in mood. An analysis of variance did not reveal any significant difference when subjects rated their partners on the depression and hostility scales of the MAACL (Zuckerman & Lubin, 1977). The mean depression rating which lonely subjects assigned their partners was 52.79 and the mean depression rating which non-lonely subjects assigned their partners was 51.11 (See Table 3). The mean rating of hostility which lonely subjects gave their partners was 47.82 and the mean rating which non-lonely subjects gave their partners was 47.11 (See Table 3).

TABLE 2

INTERRATER RELIABILITY:

BEHAVIOR	r
Eye Contact	0.95
Self-Disclosure	0.96
Questions	0.95
Topic Changes	0.95
Talk Time	0.90
Minimal Encouragers	0.96
Restating and Highlighting	0.99
Who Initiated	1.00

TABLE 3

MEANS AND STANDARD DEVIATIONS OF MAACL RATINGS: ANXIETY SELF, DEPRESSION SELF, HOSTILITY SELF, ANXIETY OTHER, DEPRESSION OTHER, HOSTILITY OTHER

	LONELY		NON-LONELY	
	MEAN	SD	MEAN	SD
ANXIETY SELF	55.68	8.13	51.64	7.19
DEPRESSION SELF	52.21	6.11	49.93	5.54
HOSTILITY SELF	49.14	8.71	48.18	4.95
ANXIETY OTHER	55.43	8.05	50.75	7.85
DEPRESSION OTHER	52.79	6.15	51.11	5.26
HOSTILITY OTHER	47.82	6.39	47.11	6.93

TABLE 4

ANALYSIS OF VARIANCE

RATING OF PARTNER'S ANXIETY (MAACL RATING)

SOURCE	SS	df	MS	F
Subject's Loneliness	339.457	1	339.457	5.256*
Partner's Loneliness	37.029	1	37.029	0.573
2-Way Interactions Subject's by Partner's loneliness	18.579	1	18.579	0.288
Explained	362.053	3	120.684	1.869
Residual	3358.501	52	64.857	
Total	3720.554	55	67.646	

*p. < .05

RATING OF PARTNER'S DEPRESSION (MAACL RATING)

Source	SS	df	MS	F
Subject's Loneliness	81.779	1	81.779	2.493
Partner's Loneliness	61.779	1	61.779	1.884
2-Way Interactions Subject's by Partner's loneliness	0.114	1	0.114	0.003
Explained	101.339	3	33.78	1.03
Residual	1705.5	52	32.798	
Total	1806.839	55	32.852	

The expectation that lonely subjects would be more depressed, anxious, and hostile was not supported by the data. Separate two by two analyses of variance of the subjects' ratings of their own anxiety, depression, and hostility were conducted. Main effects failed to reach significance and there were no significant interaction effects (See Tables 4 and 5). Lonely subjects' mean rating of their own anxiety was 55.68; non-lonely subjects' mean rating was 51.64 (See Table 3). For their own depression the respective mean ratings for lonely and non-lonely subjects were 52.21 and 49.93 (See Table 3). For ratings of their own depression and hostility there were no significant main or interaction effects (See Table 6).

It was expected that lonely subjects would give their partner's fewer minimal encourager's to talk, and that they would restate and highlight their partner's statements less. For lonely and non-lonely subjects the mean number of minimal encouragers to talk was 2.25 and 3.36 respectively (See Table 7). A two by two analysis of variance was conducted on each item and no significant main effects or interaction effects were found (see Table 8). There were also no significant main effects or interaction effects for topic changes (See Table 9). Lonely subjects changed the topic an average of 1.25 times and non-lonely subjects changed the topic an average of 1.75 times (See Table 7).

TABLE 5

RATING OF PARTNER'S HOSTILITY (MAACL RATING)

SOURCE	SS	df	MS	F
Subject's Loneliness	20.064	1	20.064	0.439
Partner's Loneliness	23.207	1	23.207	0.508
2-Way Interactions Subject's by Partner's loneliness	0.029	1	0.029	0.001
Explained	30.379	3	10.126	0.222
Residual	2375.55	52	45.684	
Total	2405.928	55	43.744	

ANXIETY SELF (MAACL RATING)

Source	SS	df	MS	F
Subject's Loneliness	134.064	1	134.064	2.209
Partner's Loneliness	23.027	1	23.207	0.382
2-Way Interactions Subject's by Partner's loneliness	1.829	1	1.829	0.03
Explained	253.053	3	84.351	1.39
Residual	3155.50	52	60.683	
Total	3408.553			

TABLE 6

ANALYSIS OF VARIANCE

DEPRESSION SELF (MAACL RATING)

Source	SS	df	MS	F
Subject's Loneliness	48.029	1	48.029	1.366
Partner's Loneliness	3.457	1	3.457	0.98
2-Way Interactions Subject's by Partner's loneliness	4.464	1	4.464	0.127
Explained	81.064	3	27.021	0.768
Residual	1828.65	52	35.166	
Total	1909.714	55	34.722	

HOSTILITY SELF (MAACL RATING)

Source	SS	df	MS	F
Subject's Loneliness	0.064	1	0.064	0.001
Partner's Loneliness	67.207	1	67.207	1.359
2-Way Interactions Subject's by Partner's loneliness	71.429	1	71.429	1.445
Explained	151.654	3	50.551	1.022
Residual	2570.90	52	49.44	
Total	2722.553	55	49.501	

TABLE 7

MEANS AND STANDARD DEVIATIONS OF BEHAVIORAL RATINGS: QUESTIONS, MINIMAL ENCOURAGERS, RESTATING AND HIGHLIGHTING, SELF-DISCLOSURE AND TALK-TIME

	LONELY		NON-LONELY	
Behavior	MEAN	SD	MEAN	SD
Questions	3.35	2.99	3.96	2.52
Talk-Time	64.9	46.50	72.4	50.7
Topic Changes	1.25	1.04	1.75	2.48
Minimal Encouragers	2.25	2.96	3.36	4.92
Restating and Highlighting	1.25	1.50	1.04	1.53
Self-Disclosure	7.93	7.43	8.75	6.32
Partner's Intelligence	4.89	0.99	4.75	0.84
Attraction	10.57	1.854	10.57	1.665

TABLE 8

ANALYSIS OF VARIANCE:

MINIMAL ENCOURAGERS TO TALK

Source	SS	df	MS	F
Subject's Loneliness	26.579	1	26.579	1.574
Partner's Loneliness	10.864	1	10.864	0.643
2-Way Interactions Subject's by Partner's Loneliness	0.714	1	0.714	0.042
Explained	28.739	3	9.58	0.567
Residual	878.10	52	16.887	
Total	906.839	55	16.488	

RESTATING AND HIGHLIGHTING

Source	SS	df	MS	F
Subject's Loneliness	1.029	1	1.029	0.420
Partner's Loneliness	0.457	1	0.457	0.187
2-Way Interactions Subject's by Partner's Loneliness	0.457	1	0.457	
Explained	1.557	3	0.519	0.212
Residual	127.30	52	2.448	
Total	128.857	55	2.343	

It was expected that lonely subjects would talk less and ask fewer questions than non-lonely subjects. The lonely and non-lonely groups did not differ significantly on talk-time (See Table 9) or the number of questions asked (See Table 10). The expected main effects for these behaviors were not significant, and no interaction effects were found for any of these behaviors. The lonely subjects asked a mean of 3.35 questions and non-lonely subjects asked a mean of 3.96 questions. The mean number of self-disclosures by lonely subjects was 7.93 and the mean for non-lonely subjects was 8.75 (See Table 7). It had been expected that lonely subjects would self-disclose significantly more or less than non-lonely subjects. A chi square (df = 2) carried out to compare the frequency distribution of the two groups yielded a chi square of 1.24 which was not significant.

There was no significant difference in the amount of time that subjects spoke; lonely subjects spoke for an average of 64.9 seconds and non-lonely subjects spoke for an average of 72.4 seconds (See Table 7).

It was expected that there would be less mutual eye contact in the L-L dyads than in the N-N dyads. This expectation was not confirmed. Since this measure was mutual the unit of analysis was the dyad. Due to technical problems there were some missing data in three L-L and three N-N dyads. A one way analysis of variance yielded F (2,21) = 0.40 which was not significant (See Table 10).

There were no significant differences between groups when subjects rated such behaviors as their partner's intelligence, and their attraction to their partner. The latter measure was derived by summing the subjects' responses to the personal feelings items and and desirability of partner as a work partner. Each individual item was rated on a 7-point scale. For both groups the ratings were in a positive direction and no significant main effects were found (See Table 11). The mean rating of their partner's intelligence by lonely subjects was 4.89 and by non-lonely subjects the mean was 4.75. For attraction of partner the mean rating that both lonely and non-lonely subjects assigned their partners was 10.57 (See Table 7.)

TABLE 9

ANALYSIS OF VARIANCE:

TOPIC CHANGES

Source	SS	df	MS	F
Subject's Loneliness	4.287	1	4.287	2.54
Partner's Loneliness	.788	1	.788	0.467
2-Way Interactions Subject's by Partner's loneliness	.087	1	.087	.052
Explained	4.375	3	1.487	.865
Residual	87.625	52	1.685	
Total	92.	55	1.673	

AMOUNT OF TALK-TIME

Source	SS	df	MS	F
Subject's Loneliness	1554.443	1	1554.43	.639
Partner's Loneliness	1078.088	1	1078.088	.443
2-Way Interactions Subject's by Partner's loneliness	307.545	1	307.545	.126
Explained	2173.133	3	724.378	.298
Residual	126589.719	52	2434.418	
Total	1268762.85	55		

TABLE 10

ANALYSIS OF VARIANCE:

QUESTIONS

Source	SS	df	MS	F
Subject's Loneliness	5.402	1	5.402	.691
Partner's Loneliness	.402	1	.402	.051
2-Way Interactions Subject's by Partner's loneliness	6.216	1	6.216	.795
Explained	11.779	3	3.926	.502
Residual	406.775	52	7.823	
Total	418.554	55		

ANALYSIS OF VARIANCE

EYE CONTACT (SECONDS)

Source	SS	df	MS	F
Between	96	2	48	0.40
Within	2527	21	120	
Total	2623	23		

TABLE 11

ANALYSIS OF VARIANCE

ATTRACTION (LIKING FOR PARTNER PLUS DESIRABILITY AS A WORK PARTNER)

Source	SS	df	MS	F
Subject's Loneliness	0.402	1	0.402	0.126
Partner's Loneliness	2.188	1	2.188	0.687
2-Way Interactions Subject's by Partner's loneliness	0.002	1	0.002	0.001
Explained	2.189	3	0.730	0.229
Residual	165.525	52	3.183	
Total	167.714	55	3.049	

PARTNER'S INTELLIGENCE

Source	SS	df	MS	F
Subject's Loneliness	0.714	1	0.714	0.823
Partner's Loneliness	0.714	1	0.714	0.823
2-Way Interactions Subject's by Partner's loneliness	0.064	1	0.064	0.074
Explained	1.064	3	0.355	0.409
Residual	45.150	52	0.868	
Total	46.214	55		

In summary, lonely subjects reported perceiving their partners to be more anxious than non-lonely subjects did. For other variables there were no significant differences found on either main effects or interaction effects.

DISCUSSION

It was predicted that lonely subjects would be more deficient in social skills than non-lonely subjects. In fact there was no significant difference between lonely and non-lonely subjects on variables which measured overt social behavior.

It was also expected that the type of dyad subjects belonged to would affect behavior. Except for partner's anxiety lonely and non-lonely subjects did not differ in the ratings which they assigned their partners. As this finding is the only significant finding among 16 comparisons it may be attributable to chance. The ratings on these scales tended to be positive or neutral for all subjects. In part, the tendency to feel positively towards their partners may be attributable to the brevity of the interaction. Jones et al. (1981) reported that lonely subjects felt more negatively but his subjects were together for three times as long as subjects in the present study. Thus subjects would have more probability of discovering aspects of their partner's personality which they disliked.

The failure to find significant behavioral differences between lonely and non-lonely students in a casual interaction is inconsistent with findings of most other loneliness researchers. Results of other researchers consistently support the hypothesis that lonely subjects

are less socially skilled than their non-lonely peers. Lonely subjects have been found to perceive themselves as less socially skilled and to describe themselves as less friendly (Rubenstein & Shaver, 1980) and more socially inhibited than others (Horowitz & DeSales French, 1980). This is consonant with reports that lonely students have fewer good friends (e.g., Ross, Note 5). The hypothesis has also been supported by observational studies that lonely subjects do in fact behave differently. Jones (Note 3) found that lonely subjects asked fewer questions, changed the topic more often, made more self-statements than non-lonely subjects, and were slow to respond to others' comments. Jones et al. (1982) corroborate these results and also suggest that when male subjects are trained to improve specific social skills they become less lonely and are perceived as more attractive by females. Differences in the amount and style of self disclosure have also been reported (e.g. Chelune et al., 1980 ; Solano et al., 1982).

In retrospect the failure to find results which support the main hypotheses is not as puzzling as it initially appears. One overall implication of the loneliness research seems to be that lonely subjects have difficulty in forming close and meaningful attachments. Lonely students have fewer close and intimate relationships (Jones, Note 3), and fewer good friends (Ross, Note 5). They lack someone with whom they can discuss personal and private concerns (Sermat & Smyth, 1978), and they feel they receive less social support from family and friends (Corty & Young, Note 1). However they do have a

similar number of acquaintances, and tend to interact a lot with acquaintances and strangers. The literature to date largely demonstrates that lonely people have more difficulty with forming intimate relationships. Since they report having as many superficial contacts as those who are not lonely it is reasonable to expect that there are many casual situations where their behavior would not be noticeably different from that of others. The situation in the present study, an interaction between two males, is an example.

Most studies on loneliness which directly observed interpersonal interactions used mixed-sex dyads. Part of the rationale behind this is because heterosocial relationships play an important mediating role in loneliness (Wheeler & Reis, Note 7). It has been reported that students who were dating were less lonely than those who were not romantically involved (Russell et al., 1980; Perlman et al., 1978). This seems to be especially true for males. Some findings indicate that for most males loneliness was most likely to be related to their relationships with females. Solano et al. (1982) report that there is a significant inverse correlation between loneliness and disclosure to an opposite sex friend for both sexes. Subjects completed a Jourard Self-Disclosure Questionaire and a UCLA Loneliness Scale. For males (n = 37) and females (n= 38) the respective correlations were r = -.33; p <.05 and r = -.48 p < .01. There is a sex difference for the correlation betwen loneliness and perceived lack of intimate disclosure to a same sex friend. For females the relationship was significant (r = -.33, p <.05), but for males there was no significant

relationship between loneliness and lack of intimacy with other males (r = -.26). It can be inferred from these results that men's relationships with other males are less important mediators of loneliness than their relationships with females. The above findings are supported by a study by Wheeler and Reis (Note 7). They report that for both sexes there is an inverse relationship between time per day spent with females and loneliness. This can be attributed to the warmth and empathy exhibited by those who are psychologically feminine, i.e., those who play the traditional feminine role characterised by emotional responsiveness. Presumably these factors tend to reduce or offer protection against loneliness. They also further extend this area of research to suggest that the least lonely males spend time with females and have meaningful relationships with males. This is an important male subgroup because not all males (nor all females) have a meaningful relationship with males. Although meaningful relationships with females help mitigate the impact of loneliness, the authors suggest that those who have close relationships with males have additional protection against loneliness.

There are three possible factors which may account for the lack of significant differences in the present situation. First, since relationships with females are presumed to be very important in relationship to loneliness and because males and females interrelate differently it is possible that behavioral differences between lonely and non-lonely males become more exaggerated in a male-female

interaction. Second, although close relationships with males are important to males they are not experienced by all males and therefore it is reasonable to assume that males do not expect to interact closely with one another. Third, disclosure to a same sex friend is not necessarily related to a higher degree of loneliness for males, and is not usually as important to the average male as intimacy with females. Because of this it is likely that disclosure to a male stranger would be unimportant. In summary, since the present design used only males it precludes the discovery of differences which would probably have emerged had lonely subjects interacted with females. The deficiencies of lonely males may well lie in their ability to relate to females.

Overall the findings of the present study do not support the main hypotheses, and do not replicate other research reports that lonely subjects are less socially skilled than non-lonely subjects. Several aspects of the present study distinguish it from other studies on loneliness and these differences may suffice to account for the difference in findings. In addition to the sex of the subjects other factors to be addressed are the naturalistic setting of the present study, and the physical proximity of subjects during the experiment. It is therefore suggested that lonely people do not behave differently from others under some conditions. In this section these differences will be examined in an attempt to account for the results obtained.

The chief difference between the present study and other studies

which set out to observe behavior directly is that the former employed a naturalistic situation and the latter used structured or analogue situations. More specifically subjects in the present study were not directed to interact or to act in any particular manner. They were simply asked to wait for the experimenter to return. This increased the probability that subjects might exercise their choice not to interact at all or to interact for only a very brief proportion of their allotted time together. Thus it is believed that because of these factors the present study has more validity than the analogue studies. In other studies subjects were instructed to get acquainted with their partners or to discuss what attracted them to the opposite sex (Jones et al., 1982). Solano et al. (1982) provided subjects with a list of topics, a stopwatch and an instruction sheet. One person was randomly assigned to go first and had to speak on it for a maximum of one minute, and then the partner took a turn. In this study the situational demands increased the likelihood that subjects would engage in an interaction for the total duration of the experiment.

In the present study the total amount of talk time for lonely subjects did not differ from that of non-lonely subjects. This suggests that lonely subjects are no more or less likely to maintain a conversation with a stranger than a non -lonely person. A frequency count was done on the L-N dyad to check whether lonely people were less likely to initiate a conversation with a stranger. It was found that lonely subjects initiated the conversation the same number of

times as the non-lonely subjects. This suggests that under some conditions lonely and non-lonely people might be equally inclined to exchange greetings without involving themselves in a prolonged discussion.

The relationship between the highly structured situations in other loneliness studies and the present situation is analogous to the relation between role play tests used to test social skills and the corresponding in vivo situations. Because role play tests have have little validity, it is contended that the validity of analogue situations is also questionnable. Bellack et al. (1978) criticized the validity of role play test when their research found very low correlations between peoples' behavior in the two situations. Another related study also found little correlation between the two situations and also reported a differential result for the sexes (Bellack, Hersen & Lamparski, 1979). For males the correlation between smiles and eye contact was significant, however; the correlations between certain behaviors such as speech duration and number of questions asked were close to zero. Given that most loneliness studies have looked at male verbal behavior, it further leads one to question the obtained results.

Another factor which may have inhibited subjects interaction is the furniture arrangement. In the present study the experimental lab was set up to resemble a waiting room and subjects were seated side by side at a 180 degree angle. Due to the constraints of space

availability subjects were also seated close together. Evidence has been found that both these factors tend to inhibit sociability (Mehrabian & Diamond, 1971). They found that as distance increased so did relaxation and that a less direct orientation was not conducive to conversation especially in pairs who were usually described as more outgoing than average. It is noted, however, that had subjects been seated face to face they may have interpreted that situation as a cue to interact.

In summary, it is argued that although lonely people may have more social skill deficits than non-lonely people, this may not be apparent in casual social situations .

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APPENDIX A

Release Form

I am aware that the discussion was recorded on videotape. I understand that the contents of the tape will be kept confidential. I give my permission for this tape to be used for research purposes, and understand that the tape will be erased completely once the experimenter has used it for statistical purposes.

I agree not to discuss the experiment with anyone for the next six months.

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Signature